عنوان مقاله:

Numerical and experimental the steel square shells with square cutout subjected to compression investigation of

محل انتشار:

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خلاصه مقاله:

Within this contribution, buckling of square-sectioned thin-walled steel shells will be analyzed. The experimental results will be assessed by FEM simulation results within various square cutouts of the specimen. The experimental buckling tests have been conducted using a Servo hydraulic machine (Instron 8820). Considering the broad application range of square-sectioned thin-walled shells, prediction of the behavior of these elements in axial loading cases, and especially for buckling behavior, has gained a great level of importance. In this study, the influence of size and location of cutouts on the predicted buckling values for the square-sectioned thin-walled has been explored. Numerical simulations of square sections subjected to axial load were conducted and the analytical solutions show excellent agreement with the numerical results predicted by FEM.

کلمات کلیدی:

square sectioned thin-walled shells- Buckling- square cutout, FEM Analysis- Experimentalanalysis

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